# State Estimates of Substance Use from the 2002–2003 National Surveys on Drug Use and Health

Douglas Wright Neeraja Sathe

DEPARTMENT OF HEALTH AND HUMAN SERVICES
Substance Abuse and Mental Health Services Administration
Office of Applied Studies



## Acknowledgments

This report was prepared by the Office of Applied Studies (OAS), Substance Abuse and Mental Health Services Administration (SAMHSA), and by RTI International (a trade name of Research Triangle Institute), Research Triangle Park, North Carolina. Work by RTI was performed under Contract No. 283-98-9008. At SAMHSA, Douglas Wright was responsible for the content, analysis, and writing of the report, and Joseph C. Gfroerer reviewed and provided numerous suggestions and improvements on its content and format. At RTI, Neeraja Sathe was responsible for writing of the report, and Ralph Folsom was responsible for the overall methodology and estimation for the modelbased Bayes estimates and prediction intervals. The following staff were responsible for generating the estimates and providing other support and analysis: Akhil Vaish, Neeraja Sathe, and Kathy Woodside. Bing Liu, Brenda Porter, and Misty Foster worked on generating the tables. Ms. Sathe and Jason Guder also provided oversight for production of the report. Mary Ellen Marsden reviewed the report, Richard S. Straw and K. Scott Chestnut edited it, Joyce Clay-Brooks formatted its text and tables, and Pamela Couch Prevatt, Teresa F. Gurley, and Kim Cone prepared its print and Web versions. Justine L. Allpress, David Chrest, Jeanne Game, Bill Wheaton, and Shari B. Lambert prepared the maps. Final report production was provided by Beatrice Rouse, Coleen Sanderson, and Jane Feldmann at SAMHSA.

### **Public Domain Notice**

All material appearing in this report is in the public domain and may be reproduced or copied without permission from SAMHSA. However, this publication may *not* be reproduced or distributed for a fee without the specific, written authorization of the Office of Communications, SAMHSA, U.S. Department of Health and Human Services. Citation of the source is appreciated. Suggested citation:

Wright, D., & Sathe, N. (2005). State Estimates of Substance Use from the 2002–2003 National Surveys on Drug Use and Health (DHHS Publication No. SMA 05-3989, NSDUH Series H-26). Rockville, MD: Substance Abuse and Mental Health Services Administration, Office of Applied Studies.

# **Obtaining Additional Copies of Publication**

Copies may be obtained, free of charge, from the National Clearinghouse for Alcohol and Drug Information (NCADI), a service of SAMHSA. Write or call NCADI at:

National Clearinghouse for Alcohol and Drug Information P.O. Box 2345, Rockville, MD 20847-2345 301-468-2600, 1-800-729-6686, TDD 1-800-487-4889

## **Electronic Access to Publication**

This publication can be accessed electronically through the Internet connections listed below:

http://www.samhsa.gov http://www.oas.samhsa.gov

### **Originating Office**

SAMHSA, Office of Applied Studies 1 Choke Cherry Road, Room 7-1044 Rockville, MD 20857

January 2005

Table B.8 Alcohol Use in Past Month, by Age Group and State: Percentages, Annual Averages Based on 2002 and 2003 NSDUHs

					1000	Canada Accada Canada	THE RESIDENCE AND ADDRESS OF THE PERSON NAMED AND ADDRESS OF T	The second secon
		Total		12-17		18-25	. 20	26 or Older
State	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval
Total	50.50		17.67		160.91		53.22	
Alabama	36.83	(33.76 - 40.00)	15.00	(12.74 - 17.58)	50.96	(47.15 - 54.75)	37.27	(33.46 - 41.24)
Alaska	50.89	(47.58 - 54.19)	15.90	(13.53 - 18.59)	59.83	(55.79 - 63.75)	55.92	(51.65 - 60.09)
Arizona	50.20	(46.62 - 53.77)	18.69	(15.91 - 21.82)	58.45	(54.44 - 62.36)	53.29	(48.82 - 57.70)
Arkansas	38.93	(35.86 - 42.08)	11.91	(14.24 - 19.50)	53.79	(49.66 - 57.87)	39.34	(35.54 - 43.27)
California	50.97	(49.22 - 52.72)	15.28	(13.89 - 16.77)	55.53	(53.38 - 57.66)	55.38	(53.14 - 57.59)
Colorado	59.22	(56.15 - 62.23)	20.63	(17.77 - 23.83)	68.89	(65.10 - 72.45)	62.79	(59.02 - 66.42)
Connecticut	57.93	(54.53 - 61.26)	18.88	(16.26 - 21.81)	72.28	(68.78 - 75.52)	61.02	(56.81 - 65.07)
Delaware	\$3.06	(49.85 - 56.24)	18.35	(15.85 - 21.14)	62.71	(58.89 - 66.38)	55.89	(51.92 - 59.78)
District of Columbia	56.69	(53.19 - 60.14)	13.02	(10.76 - 15.66)	67.17	(63.18 - 70.92)	58.52	(54.23 - 62.70)
Florida	52.44	(50.73 - 54.14)	17.35	(15.88 - 18.92)	99.69	(57.47 - 61.81)	55.68	(53.59 - 57.75)
Georgia	46.07	(42.99 - 49.17)	15.09	(12.82 - 17.67)	52.19	(48.12 - 56.22)	49.41	(45.58 - 53.25)
Hawaii	48.71	(45.29 - 52.15)	17.96	(15.20 - 21.10)	58.57	(54.41 - 62.62)	51.28	(47.05 - 55.50)
Idaho	47.70	(44.58 - 50.84)	17.37	(14.80 - 20.28)	53.62	(49.57 - 57.62)	51.34	(47.31 - 55.36)
Illinois	51.71		18.65	(17.20 - 20.20)	64.16	(62.14 - 66.14)	54.10	(51.91 - 56.27)
Indiana	46.60	1	16.04		61.78	(57.97 - 65.45)	48.16	(44.14 - 52.20)
Iowa	55.37	(52.11 - 58.57)	20.18	•	67.28	(63.39 - 70.94)	57.79	(53.68 - 61.80)
Kansas	48.92		19.41	(16.68 - 22.47)	62.89	(62.20 - 69.40)	49.96	(45.76 - 54.17)
Kentucky	40.57	(37.44 - 43.78)	18.75	(16.18 - 21.63)	58.07	(54.22 - 61.83)	40.27	(36.41 - 44.26)
Louisiana	46.27	(43.27 - 49.29)	19.35		61.41	(57.67 - 65.02)	47.30	(43.54 - 51.09)
Maine	52.17	1	16.55	(14.07 - 19.36)	92.99	(63.01 - 70.31)	54.44	(50.34 - 58.48)
Maryland	54.67	(51.22 - 58.08)	17.14	(14.65 - 19.95)	64.21	(60.26 - 67.98)	58.34	(54.08 - 62.47)
Massachusetts	59.59	(56.32 - 62.78)	21.04	(18.40 - 23.96)	68.94	(65.08 - 72.56)	62.75	(58.74 - 66.60)
Michigan	53.78		19.23		66.30	(64.42 - 68.13)	56.54	(54.38 - 58.67)
Minnesota	58.45	(55.14 - 61.68)	19.54	(16.89 - 22.49)	70.68	(66.91 - 74.18)	61.73	(57.55 - 65.74)
Mississippi	35.54	(32.42 - 38.78)	14.72	(12.39 - 17.42)	50.24	(46.10 - 54.37)	35.72	(31.83 - 39.80)
Missouri	53.21	(49.91 - 56.48)	19.61	(17.09 - 22.52)	64.52	(60.82 - 68.05)	55.85	(51.68 - 59.93)
Montana	55.36	(52.03 - 58.65)	24.73	(21.74 - 27.98)	69.29	(65.56 - 72.80)	57.19	(52.98 - 61.28)

122

Table B.8 Alcohol Use in Past Month, by Age Group and State: Percentages, Annual Averages Based on 2002 and 2003 NSDUHs (continued)

					AGE GRO	AGE GROUP (Years)		
		Total		12-17		18-25	26	26 or Older
State	Estimate	95% Prediction Interval						
Nebraska	53.98	(50.60 - 57.32)	22.24	(19.36 - 25.42)	68.38	(64.64 - 71.90)	55.77	(51.53 - 59.92)
Nevada	20.68	(47.26 - 54.10)	18.40	(15.73 - 21.39)	56.37	(52.47 - 60.20)	54.12	(49.91 - 58.27)
New Hampshire	59.80	(56.45 - 63.05)	21.44	(18.60 - 24.58)	71.78	(68.28 - 75.03)	63.20	(59.02 - 67.20)
New Jersey	57.73	(54.41 - 60.98)	18.77	(16.17 - 21.69)	65.06	(61.05 - 68.88)	61.72	(57.67 - 65.61)
New Mexico	47.83	(44.32 - 51.37)	20.67	(17.53 - 24.21)	60.78	(56.66 - 64.75)	49.67	(45.25 - 54.09)
New York	54.71	1	19.49	(17.96 - 21.13)	64.34	(62.15 - 66.47)	57.59	(55.29 - 59.86)
North Carolina	40.59	(37.28 - 43.98)	16.12	(13.68 - 18.91)	56.43	(52.49 - 60.30)	41.18	(37.07 - 45.40)
North Dakota	58.04	(54.77 - 61.24)	25.23	(22.07 - 28.67)	73.06	(69.32 - 76.49)	59,42	(55.32 - 63.39)
Ohio	51.81	(49.99 - 53.62)	17.52	(16.11 - 19.03)	65.40	(63.40 - 67.35)	54.20	(51.90 - 56.49)
Oklahoma	45.94	(39.48 - 46.46)	16.04	(13.58 - 18.85)	58.23	(54.18 - 62.17)	43.81	(39.46 - 48.26)
Oregon	53.14	1	17.07	(14.50 - 19.99)	65.32	(61.47 - 68.97)	55.79	(51.65 - 59.85)
Pennsylvania	51.10	1	18.06	1	64.85	(62.76 - 66.88)	53.14	(50.87 - 55.39)
Rhode Island	58.96	1	22.12	(19.16 - 25.40)	76.07	(72.51 - 79.31)	60.38	(55.95 - 64.64)
South Carolina	45.07		14.36	(12.08 - 16.99)	51.10	(57.16 - 64.89)	46.35	(42.29 - 50.47)
South Dakota	55.18	9	22.07	(19.12 - 25.34)	71.49	(67.86 - 74.87)	56.98	(53.03 - 60.84)
Tennessee	36.27	1	13.27	(11.08 - 15.80)	46.50	(42.25 - 50.80)	37.48	(33.78 - 41.34)
Texas	47.27		17.56	(16.14 - 19.09)	57.99	(\$5.89 - 60.05)	49.86	(47.77 - 51.95)
Utah	29.57	(26.53 - 32.80)	10.23	(7.93 - 13.10)	35.74	(31.64 - 40.06)	31.40	(27.32 - 35.79)
Vermont	58.43		22.00	(19.29 - 24.98)	73.45	(69.87 - 76.75)	69.09	(56.52 - 64.71)
Virginia	51.17	3	18.40	3	61.25	(57.52 - 64.86)	53.91	(49.82 - 57.95)
Washington	56.31		. 18.15		99.69	(59.93 - 67.23)	60.33	(56.28 - 64.24)
West Virginia	37.20		18.28	(15.76 - 21.09)	53.18	(49.41 - 56.91)	36.81	(33.02 - 40.77)
Wisconsin	57.92		21.39		72.05	(68.39 - 75.44)	60.48	(56.47 - 64.36)
Wyoming	52.14	(48.69 - 55.56)	18.30	(15.80 - 21.10)	66.48	(62.65 - 70.10)	54.35	(49.98 - 58.67)

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach, and the 95 percent prediction (credible) intervals are generated by Markov Chain Monte Carlo techniques.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002 and 2003.

41005

Table B.9 Binge Alcohol Use in Past Month, by Age Group and State: Percentages, Annual Averages Based on 2002 and 2003 NSDUHs

			-	-	TO TOTY	TOTAL CITALIST		The second secon
		Total		12-17		18-25	20	26 or Older
State	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval
Total	22.75		10.65		41.25	The state of the s	21.20	
Alabama	18.10	(15.92 - 20.51)	8.23	(6.65 - 10.14)	34,97	(31.54 - 38.56)	16.45	(13.84 - 19.44)
Alaska	23.13	(20.76 - 25.68)	11.42	(9.55 - 13.61)	41.22	(37.54 - 45.00)	22.26	(19.32 - 25.50)
Arizona	24.32	(21.85 - 26.98)	11.94	(9.82 - 14.44)	41.43	(37.57 - 45.41)	23.04	(20.04 - 26.34)
Arkansas	21.76	(19.48 - 24.22)	11.31	(9.39 - 13.57)	39.76	(35.91 - 43.73)	19.99	(17.29 - 23.00)
California	21.25	(19.96 - 22.61)	9.16	(8.09 - 10.36)	35.41	(33.32 - 37.56)	20.43	(18.81 - 22.16)
Colorado	25.75	(23.27 - 28.39)	11.04	(9.17 - 13.22)	46.73	(42.82 - 50.68)	24.10	(21.09 - 27.38)
Connecticut	23.09	(20.61 - 25.78)	11.18	(9.10 - 13.66)	48.14	(44.30 - 52.00)	21.04	(18.10 - 24.31)
Delaware	23.71	(21.43 - 26.14)	10.46	(8.56 - 12.72)	42.89	(39.14 - 46.72)	22.12	(19.41 - 25.09)
District of Columbia	25.34	(22.62 - 28.26)	5.62	(4.29 - 7.34)	39.25	(35.28 - 43.37)	24.35	(21.13 - 27.88)
Florida	21.74	(20.41 - 23.13)	9.50	(8.40 - 10.73)	39.02	(36.94 - 41.14)	20.76	(19.16 - 22.46)
Georgia	20.73	(18.53 - 23.12)	8.20		33.73	(29.88 - 37.81)	20.17	(17.55 - 23.07)
Hawaii	23.68		11.93		41.12	(36.94 - 45.43)	22.47	(19.38 - 25.90)
Idaho	21.05		11.57		36.12	(32.37 - 40.05)	19.45	(16.66 - 22.59)
Illinois	25.17	1	11.70		46.77	(44.79 - 48.76)	23.22	(21.48 - 25.05)
Indiana	22.27		9.82	(8.13 - 11.81)	45.11	(41.45 - 48.83)	19.83	(17.18 - 22.78)
Iowa	26.34		13.85	(11.69 - 16.34)	48.87	(44.84 - 52.91)	23.72	(20.72 - 27.00)
Kansas	21.71	(19.46 - 24.14)	11.56	(9.45 - 14.07)	45,26	(41.44 - 49.14)	18.63	(15.91 - 21.69)
Kentucky	19.24	(17.15 - 21.52)	11.08	(9.19 - 13.29)	38.83	(35.06 - 42.74)	16.86	(14.40 - 19.64)
Louisiana	23.77		10.87	(9.01 - 13.05)	40.36	(36.81 - 44.01)	22.39	(19.60 - 25.45)
Maine	21.74	(19.54 - 24.12)	11.12	(9.19 - 13.40)	44.67	(40.86 - 48.55)	19.64	(17.05 - 22.51)
Maryland	21.65		9.43	(7.74 - 11.46)	39.77	(35.91 - 43.75)	20.48	(17.66 - 23.61)
Massachusetts	27.12		14.19	1	46.98	(42.84 - 51.17)	25.64	(22.49 - 29.05)
Michigan	24.46		12.06	,	44.49	(42.59 - 46.41)	22.75	(21.11 - 24.46)
Minnesota	28.07	•	13.27	(11.16 - 15.70)	49.84	(45.79 - 53.88)	26.22	(23.18 - 29.51)
Mississippi	19.70		8.52		32.24	(28.55 - 36.17)	18.86	(16.17 - 21.88)
Missouri	24.56	(22.20 - 27.09)	12.61	(10.59 - 14.95)	43.89	(40.23 - 47.61)	22.80	(19.96 - 25.92)
Montana	27.41	(24.83 - 30.16)	17.85	(15.24 - 20.79)	50.83	(47.08 - 54.57)	24.58	(21.41 - 28.04)

Table B.9 Binge Alcohol Use in Past Month, by Age Group and State: Percentages, Annual Averages Based on 2002 and 2003 NSDUHs (continued)

					AGE GRO	AGE GROUP (Years)		
		Total		12-17		18-25	26	26 or Older
State	Estimate	95% Prediction Interval						
Nebraska	26.26	(23.83 - 28.85)	14.30	(12.00 - 16.97)	49.83	(45.93 - 53.73)	23.44	(20.50 - 26.66)
Nevada	20.87	(18.37 - 23.60)	10.90	(8.97 - 13.19)	33.81	(30.10 - 37.72)	20.17	(17.16 - 23.56)
New Hampshire	24.02	(21.62 - 26.60)	13.29	(11.09 - 15.85)	49.11	(45.19 - 53.04)	21.59	(18.74 - 24.75)
New Jersey	21.74	(19.41 - 24.26)	10.11	(8.27 - 12.30)	41.95	(38.14 - 45.87)	20.36	(17.63 - 23.40)
New Mexico	24.00	(21.43 - 26.77)	14.04	(11.55 - 16.96)	41.39	(37.20 - 45.70)	22.31	(19.22 - 25.74)
New York	24.27	(22.80 - 25.79)	10.71	(9.57 - 11.98)	42.55	(40.42 - 44.70)	22.96	(21.14 - 24.88)
North Carolina	19.31	1	10.02	(8.19 - 12.19)	38.03	(34.26 - 41.95)	17.40	(14.83 - 20.31)
North Dakota	31.37	(28.69 - 34.18)	16.58	(14.08 - 19.43)	55.15	(50.97 - 59.26)	28.43	(25,14 - 31,96)
Ohio	24.40	(23.13 - 25.72)	11.31	(10.22 - 12.50)	45.99	(44.01 - 47.98)	22.50	(20.90 - 24.18)
Oklahoma	19.01	(16.84 - 21.39)	10.70	(8.76 - 13.00)	37.98	(33.99 - 42.13)	16.53	(13.99 - 19.43)
Oregon	20.52	(18.29 - 22.94)	10.70	(8.80 - 12.95)	40.58	(36.75 - 44.53)	18.40	(15.78 - 21.35)
Pennsylvania	22.83	(21.53 - 24.18)	11.24	(10.12 - 12.48)	45.96	(43.88 - 48.04)	20.59	(19.00 - 22.27)
Rhode Island	26.97	•	12.73	(10.50 - 15.36)	55.31	(51.10 - 59.45)	23.56	(20.25 - 27,23)
South Carolina	22.54	(20.21 - 25.05)	8.80	(7.09 - 10.86)	42.03	(38.27 - 45.89)	20.93	(18.13 - 24.04)
South Dakota	28.13	(25.64 - 30.77)	15.85	(13.36 - 18.71)	54.15	(50.14 - 58.10)	24.89	(21.84 - 28.22)
Tennessee	16.55		8.39	(6.72 - 10.44)	29.89	(25.92 - 34.19)	15.34	(12.91 - 18.14)
Texas	23.90		9.84	(8.72 - 11.09)	40.02	(38.13 - 41.94)	22.96	(21.35 - 24.65)
Utah	15.86		7.86	(6.15 - 10.00)	24.95	(21.51 - 28.74)	14.70	(12.05 - 17.83)
Vermont	25.51		14.70	(12.50 - 17.21)	49.19	(45.15 - 53.24)	22.87	(19.87 - 26.17)
Virginia	20.51	(18.16 - 23.09)	10.70	(8.82 - 12.91)	40.44	(36.66 - 44.34)	18.58	(15.77 - 21.77)
Washington	20.94	(18.70 - 23.37)	11.06	(9.11 - 13.38)	41.67	(37.94 - 45.49)	18.76	(16.11 - 21.74)
West Virginia	19.33		13.11	(10.86 - 15.76)	38.11	(34.37 - 42.01)	17.02	(14.54 - 19.82)
Wisconsin	28.98	(26.38 - 31.73)	13.48	(11.32 - 15.97)	54.87	(50.91 - 58.77)	26.50	(23.36 - 29.91)
Wyoming	24.93	(22.54 - 27.49)	12.94	(10.73 - 15.52)	49.68	(45.71 - 53.67)	21.98	(19.09 - 25.18)

125

NOTE: Binge Alcohol Use is defined as drinking five or more drinks on the same occasion (i.e., at the same time or within a couple of hours of each other) on at least 1 day in the past 30 days.

NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach, and the 95 percent prediction (credible) intervals are generated by Markov Chain Monte Carlo techniques.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002 and 2003.